REMARKS

I. Summary of the Final Office Action

Claims 1-44 are pending in the present application.

Claims 1-44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dunn et al.

U.S. Patent No. 5,916,302 (hereinafter, "Dunn") in view of Zhu et al. U.S. Patent No. 7,069,298

(hereinafter, "Zhu").

II. Summary of Applicants' Reply

In this Response, Applicants amend claims 1, 12, 20, 26, 30, 31, and 36-44, and address the

Examiner's objections and rejections. Support for the amendments to the claims can be found

throughout the application. Amendments to the claims are being made solely to expedite

prosecution and do not constitute an acquiescence to any of the Examiner's rejections. Applicants'

silence with regard to the Examiner's rejections of the dependent claims constitutes a recognition

by Applicants that the rejections are moot based on Applicants' remarks relative to the independent

claim from which the dependent claims depend. Applicants reserve the option to further

prosecution the same or similar claims in the present or a subsequent application. Upon entry of the

Amendment, claims 1-44 are pending.

Reconsideration and prompt allowance of the present application is respectfully requested.

III.   The Rejections of the Claims Under 35 U.S.C. § 103(a)

Applicants' independent claim 1 is directed to a multipoint conferencing system for use in a computer network. Applicants' independent claims 12, 20, and 31 are directed to conference servers and a link manager for a multipoint conferencing system and Applicants' independent claims 26 and 36 are directed to methods and computer program products for setting up an impromptu multipoint conference. Applicants' independent claim 1 includes, among other things, a link manager coupled to the network, where the link manager is configured to:

> "selectively assign a first one of the conference servers to a first plurality of the plurality of conference endpoints and a second one of the conference servers to a second plurality of the plurality of conference endpoints,"

> "communicate at least first control signals to the selectively assigned conference servers to establish first communication links between the selectively assigned conference servers and the conference endpoints," and

> "communicate second control signals to the selectively assigned conference servers to establish second communication links among the selectively assigned conference servers through which the first plurality and the second plurality of conference endpoints participating in a same multipoint conference communicate, **wherein the second control signals comprise one or more commands to the assigned conference servers to transmit separate media streams for each of the first plurality and the second plurality of conference endpoints and, in response to receiving the separate media streams from each of the first plurality and the second plurality of conference endpoints, at least one of mix, manage, and redistribute the received separate media streams at each assigned conference server.**"

(emphasis added).

The feature of communicating "one or more commands to the assigned conference servers to transmit separate media streams for each of the first plurality and the second plurality of conference endpoints and, in response to receiving the separate media streams from each of the first plurality and the second plurality of conference endpoints, at least one of mix, manage, and redistribute the

received separate media streams at each assigned conference server" has also been incorporated into each of Applicants' independent claims 12, 20, 26, 31, and 36.

As described in Applicants' specification, "Intelligent Linking allows each conference server to send and receive multiple separate video and audio streams for each endpoint and mix them locally on each conference server" (See, e.g., Applicants' specification, paragraph [0008]). Using this feature, each endpoint may, for example, see QCIF [Quarter Common Intermediate Format] sized images stitched together to form a single CIF sized image instead of the mini-panes or mixed multiple images from conventional bridges that are connected to each other by having the bridges call each other (Id.).

In rejecting Applicants' independent claims, the Examiner particularly referred to FIG. 14 of Zhu, which describes two clients each connected to a collaboration server in different meeting zones. More particularly, one of the collaboration servers establishes a "high-speed real-time messaging link" with the other collaboration server.

Contrary to the Examiner's assertion, however, Applicants respectfully submit that nowhere in Zhu is there any disclosure or suggestion that a link manager communicates "one or more commands to the assigned conference servers to transmit separate media streams for each of the first plurality and the second plurality of conference endpoints." Rather, as is discussed in more detail below, it is clear that FIG. 14 of Zhu is similar to the simple cascading approach described in Applicants' Background.

As described in Applicants' Background of the Invention, simple cascading creates multipoint conferences on two or more video bridges, where the conferences are connected together "by having the video bridges call one another" (See, e.g., Applicants' specification, paragraph [0008]). "In simple cascading, each bridge is viewed by the other bridge(s) in the call as if it were a

single endpoint." (*Id.*). Similarly, FIG. 14 of Zhu is described as "illustrating the communication channels established between client computers 210A and 210B during an on-line conference" (See Zhu, column 11, line 66 through column 12, line 1). The client computer connects to a collaboration server, which establishes a messaging link with another collaboration server that is connected to another client computer. Each collaboration server is viewed by the other collaboration servers in the call as if it were a single endpoint. FIG. 14 of Zhu is reproduced below for the Examiner's convenience.

FIG. 14
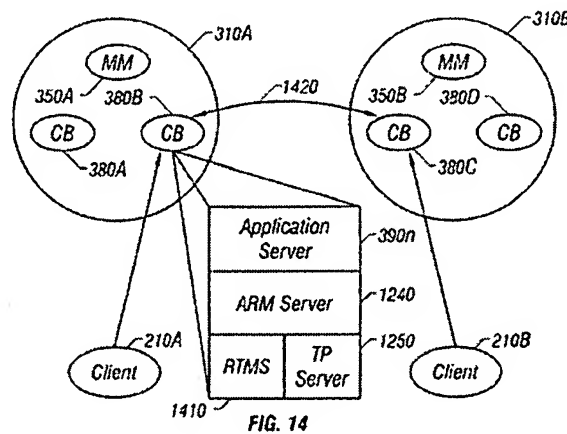
In addition, Applicants would like to point out to the Examiner that Applicants' claims include the feature of communicating one or more commands to the assigned conference servers that "in response to receiving the separate media streams from each of the first plurality and the second plurality of conference endpoints, at least one of mix, manage, and redistribute the received separate media streams at each assigned conference server." That is, each conference server is aware of which media streams are viewed by the conference endpoints connected to that conference server. Accordingly, instead of transmitting multiple copies of media (e.g., audio, video, etc.) across a network, separate media streams are transmitted and received between conference servers and mixed, managed, and/or redistributed at each conference server. This can, for example,

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conserve bandwidth of the network and/or improve CPU efficiency of the conference server (See, e.g., Applicants' specification, paragraphs [0007] and [0029]).

Again, it is clear that the system of Zhu in no way mixes, manages, or redistributes "the received separate media streams at each assigned conference server." Instead, FIG. 14 and the accompanying description of Zhu describes that data from a client computer 210A is transmitted from collaboration server 380B to collaboration server 380C, and then the data received by server 380C is routed to client computer 210B. "If additional data needs to be transmitted from client computers 210A and 210B, . . . case stages 1530-1550 are repeated" (See Zhu, column 12, lines 24-32). Nowhere in Zhu is the feature of instructing the assigned conference servers to, "in response to receiving the separate media streams from each of the first plurality and the second plurality of conference endpoints, at least one of mix, manage, and redistribute the received separate media streams at each assigned conference server." Rather, each client computer or conference endpoint in Zhu transmits multiple copies of media streams over the network.

Accordingly, Zhu, alone or in combination with any other reference, neither discloses nor suggests the feature of communicating "one or more commands to the assigned conference servers to transmit separate media streams for each of the first plurality and the second plurality of conference endpoints and, in response to receiving the separate media streams from each of the first plurality and the second plurality of conference endpoints, at least one of mix, manage, and redistribute the received separate media streams at each assigned conference server."

Based on the foregoing Remarks, Applicants traverse the Examiner's rejection of independent claims 1, 12, 20, 26, 31, and 36. Accordingly, Applicants respectfully request that the rejections of the claims be withdrawn.

Applicants' silence with regard to the Examiner's rejections of the dependent claims constitutes a recognition by the applicants that the rejections are moot based on Applicants' Remarks relative to the independent claims from which the dependent claims depend. Accordingly, Applicants also respectfully submit that claims 2-11, 13-19, 21-25, 27-30, 32-35, and 37-44, each of which depends from one of independent claims 1, 12, 20, 26, 31, and 36, are allowable for at the same reasons that their corresponding independent claims are allowable.

IV. Deposit Account Authorization

The Director is hereby authorized to charge any fees that may be due, or to credit any overpayment of the same, to Deposit Account No. 50-4207.

In the event that an extension of time is required, or which may be required in addition to that requested in any petition for extension of time filed previously or herewith, the Director is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 50-4207.

V. Conclusion

For at least the reasons set forth above, Applicants respectfully submit that the present

application is in condition for allowance. Reconsideration and prompt allowance of the application ·

are respectfully requested.

Respectfully submitted,

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